



TruePosition Reply Comments

I. Summary of Reply

Recent FCC filings in this docket and other publicly available information suggest that approximately 60 to 80 million wireless 911 calls are inaccurately located every year due to shortcomings in FCC regulations and wireless carrier location technology.¹ This alarming statistic underscores a pressing need for FCC regulatory action. If emergency responders rely on carrier-generated locations for as little as a fraction of one percent of these millions of 911 calls, thousands of lives are at risk every year.

This failure to accurately and timely locate all E-911 calls is the direct result of the wireless carriers' decision to move toward reliance on handset-based Assisted Global Positioning Service (AGPS) technology as their primary E-911 location technology, coupled with the use of low-cost, inferior "fall-back" technology when AGPS fails. The adoption of AGPS for E911 locations is not in itself wrong; when it works AGPS is a superior technology that provides accurate and useful locations. However, AGPS takes time to report an accurate location, typically at least 30 seconds, and has difficulty performing in many environments, particularly environments such as urban areas where very high volumes of 911 calls routinely occur. The crux of the problem lies in the failure of wireless carriers to maintain a complementary technology capable of delivering an initial Phase II compliant location quickly, to assist in matters such as emergency call routing, and in environments where AGPS cannot perform optimally.

¹ See Section IV, *infra*, for detailed assumptions and calculations.

To date, the FCC's 911 wireless location standards have not mandated an acceptable period of time in which an E-911 wireless caller must be accurately located. More troubling, the current standards exclude from the location accuracy requirements wireless calls placed from indoors. Both of these deficiencies in the current standards have contributed to the inability to timely and accurately locate all E911 calls by allowing wireless carriers to implement location technologies that do not adequately fulfill the mission intended by the FCC's location standards. These deficiencies are starkly revealed in the PSAP data that has been submitted to the FCC to date.

As explained in more detail below, the data recently filed with the FCC by PSAPs, law enforcement agencies, and wireless carriers confirms:

- An overall erosion in the receipt of Phase II location information by the PSAPs.
- A failure to provide Phase II location information for calls with a duration of less than 30 seconds.
- A high overall AGPS failure rate (20-25%) for calls with a duration of greater than 30 seconds, which presumably consists primarily of calls originating indoors and in dense urban environments.
- A dangerous reliance by carriers on inferior "fall-back" location technologies when AGPS fails.

Only the carriers are in a position to identify precisely how many 911 calls do not generate an accurate, Phase II compliant location. Nevertheless, based on CTIA's estimate of 400,000 wireless 911 calls placed per day, and the wireless carriers' data submissions to the FCC, it is reasonable to assume that something on the order of 60 to 80 million wireless 911 calls per year

fail to include accurate location information. This is a nationwide public safety problem that requires swift, corrective action.

II. PSAP Data Reveals a Public Safety Problem

The CalNENA Report graphically depicted a significant decrease and overall poor performance in the delivery of Phase II location information to PSAPs in five major geographic areas of California between the years 2008 and 2012. While not all of the carriers showed a decline in the delivery of Phase II location information, the CalNENA Report concluded that by the end of 2012 not one of the nationwide wireless carriers had met the FCC's Phase II standards for 90% of 911 calls delivered in those geographic areas.

In response to the filing of the CalNENA Report and at the FCC's invitation, quite a few PSAPs and local government offices throughout the U.S. submitted their own E911 location data to the FCC. For the most part, the data in those reports conforms with or appears worse than the CalNENA data. The PSAP location data throughout the U.S. is for the most part consistent with what TruePosition has observed throughout the past five years. The general trend is that Phase II location yields have been going down for AT&T and T-Mobile, while going up slightly for Verizon and Sprint.² When PSAPs report aggregate numbers (not broken out by carrier) for the past year or two the location trend appears relatively constant because overall carrier results (some deteriorating others improving) cancel each other out. Also, much of the PSAP/local data that was recently filed with the FCC does not go back in time far enough to show the dramatic fall-off in Phase II locations reflected in the CalNENA Report in the 2010-2011 time frame.

² In general, the CDMA networks (Verizon and Sprint) delivered a higher percentage of Phase II-identified locations. The most likely explanation for different Phase II yield results between carriers would be due to network differences. AGPS works better in a CDMA environment than in a UMTS environment because CDMA networks are designed to be synchronized and are able to provide better assistance data to a mobile handset.

TruePosition's engineering and data experts have analyzed all of the PSAP reports that were submitted to the FCC. That analysis of the CalNENA and other PSAP data has been organized by True Position and presented in graphic form, arranged by state and in the aggregate, attached hereto as Exhibit One. Those graphic summaries confirm that the CalNENA Report was not an aberration; rather, E911 location accuracy has apparently been declining across the nation at the same time that an ever-increasing percentage of Americans relies exclusively on wireless phones to place emergency 911 calls.

III. Wireless Carrier Response to CalNENA Report and Analysis

To date, four nationwide wireless carriers have submitted written replies to the CalNENA Report: T-Mobile, AT&T, Verizon and Sprint. Not surprisingly, all of these carriers take exception to the assertions made and conclusions drawn in the CalNENA Report. Each of these carriers makes essentially the same argument: (1) the primary technology currently relied on by the carriers for the vast majority of their customers to calculate a Phase II compliant location, AGPS, has a time-to-first-fix (TTFF) of roughly 30 seconds and therefore is not typically available to a PSAP when the 911 call initially connects; and, (2) the PSAPs covered in the CalNENA Report failed, for the most part, to wait the required 30 seconds and then to "rebid" to receive updated Phase II information.³ Some of the carriers also claim that, according to their

³ See Letter from John T. Nakahata, Counsel to T-Mobile USA, Inc., to Marlene H. Dortch, Secretary, Federal Communications Commission, dated September 5, 2013, at 1 ("*T-Mobile Letter*") ("[T]he low number of calls with wireless Phase II information delivered to the PSAP by call end stems overwhelmingly from the fact that these PSAPs never actually requested updated Phase II locations for the vast majority of 911 calls."); Letter from Joseph P. Marx, AT&T to Hon. Mignon Clyburn, Chairwoman, Federal Communications Commission, September 6, 2013 at 2 ("*AT&T Letter*") (Asserting that its network "successfully *calculated* and *delivered* Phase II location for the counties in question over 99% of the time ..." and that the problem "can most easily be explained as a difference of vantage points."); Letter from Nneka Ezenwa Chiazor, Verizon, to Marlene H. Dortch, Secretary, Federal Communications Commission, September 11, 2013, at 3 ("*Verizon Letter*") ("[I]t appears that the principal reason for the low percentages reported by CALNENA's consultant is that the PSAPs did not retrieve Verizon Wireless' Phase II data that was in fact available.")

internal studies during relevant time periods, Phase II location information was available to these PSAPs for calls with duration of at least 30 seconds between 90% and 95% of the time.⁴

On its face, the carriers' explanation is technically sound and is consistent, for example, with the data submitted by Harris County, Texas, which automatically rebids at 30 second intervals. When considering only calls that lasted more than 30 seconds, Harris County's receipt of locations labeled as Phase II increased from roughly 65% to 88%.⁵ The public safety and regulatory compliance implications of (i) a 30-second delay in making a Phase II location available to the PSAP (which means that 911 calls with duration of less than 30 seconds will never deliver a Phase II location) and (ii) requiring the PSAP to actively request delivery of this location,⁶ are themselves significant. Nevertheless, an additional, troubling concern is highlighted in the data reported by AT&T and Verizon regarding the location technology underlying the locations identified as Phase II.

AT&T reveals that in the aggregate (not broken out by "morphology"), roughly 22% of its 911 calls with a duration of at least 30 seconds failed to produce an AGPS location in the five CalNENA markets over a 12 month period.⁷ For Verizon, the percentage is not entirely clear but appears to be similar for calls of at least 30 seconds' duration (10% not returning any Phase II plus 14% returning a Phase II not generated solely by AGPS).⁸ Given the similarities in network and handset technologies, it is reasonable to assume that T-Mobile and Sprint's results would mirror the AT&T and Verizon data.

⁴ *Verizon Letter* at 6; *T-Mobile Letter* at 2.

⁵ *See*, Exhibit One, attached hereto.

⁶ The suggestion by some carriers that their FCC regulatory obligations were met the moment they delivered E911 location information to their intermediary System Service Providers/vendors does not square with a fair reading of the FCC's rules and rulemaking decisions.⁶ Licensee/carriers are directly responsible under the FCC's rules for delivering to PSAPs accurate Phase II information with every E911 call. *See* 47 C.F.R. § 20.18(b).

⁷ *Comments of AT&T*, PS Docket No. 07-114 at p. 4 ((September 25, 2013).

⁸ *Comments of Verizon and Verizon Wireless*, PS Docket No. 07-114 at p. 4 (September 25, 2013).

IV. Implications

According to CTIA, over 146 million wireless 911 calls are placed each year.⁹ Given the high number of Americans who rely on wireless technology to reach emergency services every year, the detriment to public safety due to the carriers' current technology choices and protocols is stark.

A. Calls With a Duration of Less than 30 Seconds.

The carriers dismiss the importance of providing Phase II location information for calls lasting fewer than 30 seconds. For example, Sprint asserts that, "Most calls of such short duration, however, are likely to be short because they are duplicative during a mass calling event, *e.g.*, an accident on a highway, or because the call did not require dispatch to a particular location."¹⁰ T-Mobile goes even further, claiming that: "Short calls should have been excluded [from the CalNENA Report]. These are unlikely to be emergencies."¹¹ Other carriers indicated that they did not consider these short duration calls to be relevant to their analysis.¹²

There is no basis for such sweeping assumptions. Emergency 911 calls of a short duration, particularly where the call is "dropped," are taken very seriously by PSAPs as they could be indicative of a crisis situation where the caller has been forced by an attacker or a medical event to abandon the call. In fact, PSAPs often dispatch emergency assistance for dropped calls as this may be an indication that the individual is in immediate need of assistance. This is underscored by the 911 call answering protocols developed by NENA, and adopted by the vast majority of PSAPs nationwide; that protocol requires dispatchers to attempt to call back

⁹ CTIA "Wireless Quick Facts," <<http://www.ctia.org/advocacy/research/index.cfm/aid/10323>>.

¹⁰ *Comments of Sprint Corporation*, PS Docket No. 07-114 at p. 5 (September 25, 2013).

¹¹ *T-Mobile Letter* at p. 2.

¹² *Comments of AT&T* at p. 4, n. 5.

when a call is disconnected before the dispatcher can determine if assistance is needed.¹³

Moreover, the NENA guidelines expect dispatchers to answer 95% of 911 calls within 20 seconds, emphasizing the importance that the public safety sector places on emergency calls that are less than 30 seconds in length.¹⁴

From the data submitted by the carriers to the FCC, it is difficult to determine with precision just how many wireless 911 calls fall into this category. T-Mobile reported that 44% of the 911 calls considered in the CalNENA filing were of less than 30 seconds' duration.¹⁵ If that percentage is representative across all wireless carriers, then the carriers have deemed unimportant well over 60 million wireless 911 calls every year. As previously noted, even if only a fraction of one percent of these short duration calls requires a system generated location, that would mean that hundreds of thousands of lives would be at risk every year. It is precisely for these types of situations -- where the caller is unable to provide a location or remain on the phone with an emergency dispatcher for more than a few seconds -- that the E-911 location system must be available to assist emergency responders.¹⁶

B. Calls Originating Indoors

The carriers go out of their way to forestall consideration of the indoor location issue, claiming it is impossible to know how many calls originate indoors and therefore whether

¹³ *NENA Call Answering Standard/Model Recommendation* at p. 9 (June 10, 2006).

¹⁴ *Id.* at p. 8.

¹⁵ *T-Mobile Letter* at p. 2.

¹⁶ The determination that as many as 60 to 80 million wireless 911 calls may be inaccurately located every year was calculated as follows: carrier estimates of the percentage of wireless 911 calls that are less than 30 seconds in duration therefore terminating before rebidding (44% according to T-Mobile) equals 64,240,000; plus, 911 calls of 30 seconds or longer for which AGPS fails (22% based on AT&T data, assumes that is representative for other carriers) or 17,987,200.

locating indoor wireless 911 calls is a problem at all.¹⁷ This is not surprising given that the technologies they have implemented as a fall-back when AGPS fails do not work indoors.

1. Scope of the Indoor Problem.

The category of “indoor calls” is more aptly understood as a surrogate for calls where the satellite signals required to compute an AGPS location are blocked. This includes indoor locations in certain types of structures, and outdoor locations in urban canyons (between tall buildings) or under cover, such as heavily forested areas. When its signals are not blocked, AGPS is highly reliable and accurate. Rather than being unknown, as the carriers claim, the scope of this problem is clearly indicated in the data provided by AT&T and Verizon.

For calls with a duration of greater than 30 seconds (which should provide ample time for AGPS to generate a location), AT&T experienced a GPS failure rate of 22%.¹⁸ The Verizon data is a bit more difficult to parse, but appears to indicate a similar overall AGPS failure rate of 22%.¹⁹ If this failure rate is consistent across all carriers, and if we apply it to all wireless 911 calls, then AGPS fails to locate over 32 million calls per year. If we apply it only to calls with a duration of greater than 30 seconds, and accept the T-Mobile assertion that 44% of wireless 911 calls are of a lesser duration, then AGPS fails to locate roughly 18 million calls per year. In either case, the inability to locate calls where AGPS fails to perform, such as indoor calls, is a serious public safety problem.

¹⁷AT&T Comments, page 3; T-Mobile comments, pages 16. AT&T even goes so far as to claim that indoor calls likely do not require system generated locations at all, AT&T Comments, page 4, n. 7 (“[I]t is highly likely that any increase in the number of 911 calls made from indoor locations has resulted in more accurate location information for emergency call takers because it stands to reason that people are more likely to know where they are indoors than when moving around outdoors.”)

¹⁸ AT&T Comments, p. 4

¹⁹ Verizon Comments at p. 4. It appears that the Verizon data is for all calls of any duration. The 22% figure includes calls that did not generate any Phase II location. Verizon also indicated that the failure rate, excluding calls for which no Phase II was generated, was higher in the dense urban environments.

2. Fall-back Location Technologies.

When AGPS location signaling fails, the carrier then relies on what is referred to as its “fall-back” technology. A fall-back means that if the primary location technology fails or provides inaccurate location information the network is designed to automatically revert to another technology which – regardless of its accuracy -- is reported as Phase II compliant location information. If that fall-back technology does not deliver Phase II compliant data, yet it is reported to PSAPs (through intermediary carrier vendors) as Phase II data, the PSAP is unlikely to re-bid for a more accurate location; even if such a re-bid is made, it will not provide the PSAP with an accurate, Phase II location. Based on TruePosition’s understanding of the carriers’ fall-back technologies, and what the carriers have disclosed to the FCC to date, the fall-back technologies currently employed by the wireless carriers do not meet the FCC Phase II accuracy requirements.

For instance, in the case of AT&T and T-Mobile their fall-back technology is called “round trip time” or “RTT.” RTT is a highly inaccurate means of obtaining a 911 caller’s location; RTT is not Phase II compliant. RTT is a simple technology that computes a location based on the coverage area of the cell tower combined with measurement of the length of time it takes for a signal to be sent to the handset plus the length of time it takes for an acknowledgment of that signal to be received by the tower. RTT does not work for cell-sites with omni-directional antennas, and is not based on geometric or triangulation methodologies.

RTT cannot provide more than a very rough estimate of the caller’s location and provides little better than Phase I accuracy. RTT technology is inherently unreliable in accurately

depicting a caller's location; it would essentially be mere luck if a reported RTT location complied with the FCC's Phase II accuracy requirements.²⁰

Verizon and Sprint use a different form of fall-back technology when their AGPS technology cannot generate a Phase II location. They use a technology called Advanced Forward Link Trilateration (AFLT).²¹ AFLT is a downlink technology, whereby the phone takes timing/distance measurements of signals from nearby cellular base stations, and reports them back to the network, which uses the measurements to compute a location. Although significantly more accurate than RTT, the CSRIC Test Bed Report has already determined that indoor application of the hybrid AGPS/AFLT technology is not within the FCC's Phase II accuracy parameters.²² RTT, the technology used by AT&T and T-Mobile, was not submitted for testing in the CSRIC test bed.

If carriers are reporting RTT and AFLT locations to PSAPs as "accurate Phase II locations," that in itself is an enormous problem. PSAPS would have no reason to "rebid" the carriers (or more precisely, the carriers' E911 vendors) for location information if that location is already reported to them as Phase II-compliant, even if in reality the location is highly inaccurate. This is the key question the FCC should ask the nationwide carriers: Why have they programmed their networks to describe their fall-back technologies as delivering "Phase II compliant" locations when in reality they are sending only unreliable fall-back location data to PSAPs? For now, the position the carriers seem to be taking is "trust us," but, the technologies they are relying on for E-911 locations provide PSAPs with very little reason to trust that they are receiving accurate emergency location information in a timely manner.

²⁰ See, e.g., True Position Comments, GN Docket No. 11-117, Attachment Three (Wilmington, DE field test) and Attachment Five (Austin, TC field test) (August 6, 2013).

²¹ Verizon Letter at p.5.

²² CSRIC Working Group III, Indoor Location Test Bed Report, p. 41 (March 14, 2013).

C. 911 Call Routing

Even before a call taker at a PSAP can take the appropriate steps to address an emergency situation, the call has to be connected to the correct PSAP with jurisdiction over the caller's current location. Without an accurate location available in a timely manner, the routing of the emergency call has to rely on the location of the tower serving the call (Phase I information). In many parts of the country, a single cell site can cover an area served by multiple PSAP jurisdictions. In that scenario, call-routing based on Phase I information can often direct the emergency call to an incorrect PSAP that is much farther away from the victim than the closest PSAP, thereby further delaying the dispatch of life-saving services. While comprehensive statistics regarding how often 911 calls are misrouted to an incorrect PSAP in various parts of the country are not readily available, anecdotal evidence suggests that these are not isolated incidents.²³

Anticipating the importance of proper call routing, the FCC Office of Engineering and Technology addressed precisely this issue in its Technical Bulletin on testing and verifying wireless E911 systems. There, OET said as follows: "location information should be available as soon as possible, with little or no delay in normal call delivery, to *assist in routing the call to the correct PSAP* and to provide rapid location information to the dispatcher."²⁴

As evidenced by the high rate of Phase II locations delivered with the E911 call information by some wireless carriers in the CalNENA filing, technologies exist today that can provide accurate Phase II location information in a timely manner to allow accurate call routing

²³ See, e.g., "Misrouted 911 Call Prompts Inquiry," Daytona Beach News-Journal (October 9, 2013); "Tower of Error: Imperfect System Often Sends Calls to Incorrect Dispatcher," Battle Creek Enquirer, (February 12, 2012).

²⁴ FCC Office of Engineering and Technology Bulletin OET-71, pages 3-4.
http://transition.fcc.gov/Bureaus/Engineering_Technology/Documents/bulletins/oet71/oet71.pdf (emphasis added).

to the appropriate PSAP.²⁵ There is no reason why the clearly stated guidelines in OET-71 Bulletin cannot be put into practice by wireless carriers and enforced by the FCC.

V. Shared Data is Critical to Fixing the Problem

There is a consensus that fixing the problems shown in the CalNENA Report will require review of all relevant data by all key participants in E911 public safety; this consensus is clear from the data provided by all of the public safety entities and the comments filed by the carriers. That data must include not just the information normally available to PSAPs from a “rebid.” To isolate, understand and solve these widespread location accuracy problems the FCC should order wireless carriers to disclose the following data to PSAPs and their technical advisors: (1) specifically which location technology was used to generate the location provided for each 911 call; (2) an explanation, where pertinent, as to how the fall-back technology complies with FCC Phase II requirements; (3) the general “morphology” (i.e., rural, suburban, urban, dense urban) of the area where the call originated; and, (4) duration and latency data for each call.

The carriers have indicated that they already have this data; they reviewed it internally when they assessed the CalNENA Report and filed their comments with the FCC.²⁶ Hence, it should be easy for carriers to release this information to the FCC, to all PSAPs and to their technical advisors. The data would be crucial to an understanding of the role that carrier practices and technology choices have played in the current crisis. Without anyone spending a dime, public safety could make huge strides toward improving E911 simply by obtaining and

²⁵ See CalNENA Report, Chart One (92% Phase II locations for AT&T in January 2008).

²⁶ See, e.g., *T-Mobile Letter* at p. 1 (“[T]he low number of calls with wireless Phase II information delivered to the PSAP by call end stems overwhelmingly from the fact that these PSAPs never actually requested updated Phase II locations for the vast majority of 911 calls.”); *AT&T Letter* at p. 2 (asserting that its network “successfully *calculated and delivered* Phase II location for the counties in question over 99% of the time ...” and that the problem “can most easily be explained as a difference of vantage points.”); *Verizon Letter* at p. 3 (“[I]t appears that the principal reason for the low percentages reported by CALNENA’s consultant is that the PSAPs did not retrieve Verizon Wireless’ Phase II data that was in fact available.”).

analyzing this data. The FCC should order the carriers to immediately release this data to all PSAPs and their technical advisors.

VI. Available Technologies Can Resolve Indoor & Outdoor Location Problems

The erosion of Phase II location data sent by AT&T and T-Mobile is a direct result of carrier decisions to abandon the use of network based UTDOA location technology²⁷ implemented for their 2G (GSM) networks, substituting handset based AGPS location technology, with an RTT fall-back for their 3G (UMTS) networks. Studies have shown that UTDOA network-based technology can deliver E911 locations very rapidly and accurately.²⁸ The CalNENA data shows very good to excellent Phase II compliance by AT&T and T-Mobile for most of 2008 and 2009, when they were using UTDOA technology. UTDOA has been tested and shown to be Phase II compliant even in difficult settings such as indoors and in urban environments.²⁹ AGPS and UTDOA can be operated together as a hybrid solution, providing a UTDOA location immediately to the PSAP when the 911 call connects, and an even more accurate AGPS location during the pendency of the call in environments where AGPS works.³⁰

By contrast, the CalNENA Report shows Phase II yield falling off dramatically in early 2011 and throughout 2012; that was when these carriers switched from UTDOA to AGPS as their predominant form of E911 location technology.³¹ AGPS technology, while less expensive for the carriers to deploy since its costs are essentially borne by consumers and by the federal

²⁷ UTDOA is a wireless location technology that relies on sensitive receivers, typically located at the cell towers, to determine the location of a mobile phone. UTDOA determines location based on the time it takes a signal to travel from a mobile phone to each of the sensitive receivers called Location Measurement Units (LMUs). By using the timing information from multiple LMUs, UTDOA calculates the mobile phone's location. Since UTDOA does not rely on GPS signals to locate the user, this technology works well both indoors and outdoors in most all urban and suburban environments and is commercially available today from two major vendors, one of which is TruePosition.

²⁸ See TruePosition Comments, PS Docket No. 07-114 (August 6, 2013), Attachment Three (Wilmington, DE Test Report).

²⁹ TruePosition Comments, Attachment Three (Technocom Wilmington, DE Test Report).

³⁰ TruePosition Comments at 13-14.

³¹ CalNENA Report at Slide 1.1.

government, is well-known to have signal blocking difficulties. Moreover, the fall-back technologies that are coupled with AGPS are known to deliver little better than Phase I location information.³² Consequently, for those consumers who live and work in urban locations, high-rise buildings, heavily forested areas or near tall structures, the odds are very high that a carrier using AGPS technology will not be able to deliver that customer's E911 location to a PSAP with FCC-mandated Phase II accuracy. This is not a problem that can be overcome simply by changing PSAP call answering practices; this problem is inherent in the technologies chosen by these carriers.

These AGPS-based location problems did not happen overnight. Industry experts have warned the FCC and carriers for years that if carriers relied exclusively or predominantly on GPS-based location technologies there would be problems akin to those reflected in the CalNENA Report. Leading wireless expert Dr. Dale Hatfield identified to the FCC in 2006 significant problems related to handset-based location technology. According to Dr. Hatfield, locating wireless 911 callers, particularly those with GPS-location enabled handsets, was likely to become a serious problem with the trend toward increased indoor cellular calling.³³ The CalNENA data and carrier responses verify these assumptions.

VII. Speed of Delivery of Locations is a Critical Issue that must be Resolved

The CalNENA Report, location data from PSAPs throughout the nation, and admissions of fact from the wireless carriers all point to the need for the FCC to require specific, minimum time standards for delivery of E911 location information. Until now, carriers have been allowed to essentially monitor their own speed of delivery practices, asserting that so long as they purport to follow NENA guidelines or "best practices" that should suffice. The PSAP filings with the

³² See, generally, CSRIC III Working Group *Test Bed Report*, and TruePosition Comments at 13-14.

³³ "Martin Grilled over Hatfield Dismissal," *RCR Wireless*, March 17, 2007.

FCC make clear that the absence of a meaningful, FCC articulated standard for this most critical component of E911 – speed of delivery of location information – has exacerbated the problems reported by PSAPs nationwide.

The clear consensus among the comments filed with the FCC in response to the CalNENA Report is that E911 “latency” is an enormous problem.³⁴ For their part, carriers argue that the latency problem can be overcome if PSAPs simply “rebid” for 911 location information every 30 seconds.³⁵ That simply is not a valid response to this problem.

PSAPs should not have to wait more than 30 seconds to receive location data about someone who is having an emergency. It is manifestly inappropriate to assume that 911 calls under 30 seconds in length do not need to be located. It is a waste of public safety resources to endure the misrouting of 911 calls to the wrong PSAP when technology is available that generates an accurate location rapidly enough to support x-y routing. And no amount of rebidding will fix the problem of Phase I-quality data being inaccurately depicted as Phase II.

On the other hand, if the FCC establishes a minimum time standard for delivery of E911 locations, technology already exists to meet those standards. Carriers have acknowledged in their comments with the FCC that existing network-based technology has in the recent past enabled them to deliver E911 locations in very little time, indeed “usually concurrent with 911 call delivery.”³⁶ The PSAP can still rebid after 30 seconds to see if a more accurate AGPS location becomes available.

³⁴ See, e.g., Comments of APCO International at p. 5 (September 25, 2013); Comments of Mission Critical Partners at p. 1 (September 25, 2013); Comments of NENA –The 911 Association at pp.2-3 (September 25, 2013).

³⁵ See, e.g.,

³⁶ Comments of AT&T at p.2.

VIII. An Urgent, Nationwide Public Safety Crisis Exists

The data filed with the FCC over the past few months paints a somber picture of an E911 public safety system that desperately needs immediate regulatory attention. Life and death 911 calls are often misrouted.³⁷ Accurate location information is not delivered with the call. Emergency responders are unable to ascertain the location of dropped calls. Inaccurate or vague locations, confusingly labeled as Phase II accurate, are routinely delivered for emergency calls placed from AGPS-challenged environments. The E911 location system is broken; there is no excuse for not fixing it now. TruePosition looks forward to working with the FCC to promptly fix these urgent public safety problems.



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³⁷ See, e.g., “Misrouted 911 Call Prompts Inquiry,” [Daytona Beach News-Journal](#) (October 9, 2013); “Tower of Error: Imperfect System Often Sends Calls to Incorrect Dispatcher,” [Battle Creek Enquirer](#), (February 12, 2012).

EXHIBIT ONE

Phase I/Phase II Summary Charts